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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
08/928,156	09/12/1997	BRUCE H. BERSTED	3005102	9285

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04/10/2002

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EXAMINER

JUSKA, CHERYL ANN

ART UNIT	PAPER NUMBER
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1771

18

DATE MAILED: 04/10/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

1115-18

Office Action Summary	Application No.	Applicant(s)	
	08/928,156	BERSTED ET AL.	
	Examiner	Art Unit	
	Cheryl Juska	1771	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 January 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 92-127 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 92-127 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. Amendment D, submitted as Paper No. 17 on January 6, 2002, has been entered. The specification and claims 92 and 105 have been amended as requested. New claims 122-127 have been added. Thus, the pending claims are 92-127.
2. Amendment D is sufficient to withdraw the 112, 1st rejection set forth in section 5 of the last Office Action.

Response to Arguments

3. Applicant's arguments with respect to claims 92-121 and the Lamm Declaration under 1.132 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 92-127 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 5,455,305 issued to Galambos OR US 5,486,419 issued to Clementini et al.

Applicant claims a bulk continuous filament (BCF) yarn consisting essentially of a crystalline polypropylene homopolymer either alone or with an additive, such as pigment, flame

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retardant, or stain resisting agent. The BCF yarn has a bulk level of 2-20%, a denier of 500-3000, a shrinkage of 1-15%, and a Plug Crush Recovery (PCR) of at least 85%. In an alternative embodiment, Applicant claims the propylene polymer is (1)(a) at least one of (i) a homopolymer of polypropylene or (ii) a copolymer of propylene and (b) at least one of a copolymerizable monomer, (2) a blend of said propylene polymer with at least one other polymer, or (3) said propylene polymer or blend with an additive. Applicant also claims said BCF yarn as a carpet face yarn in a tufted carpet.

Galambos discloses a polypropylene yarn of bulk continuous filaments or staple fibers, wherein the propylene polymer is a blend of syndiotactic and isotactic polypropylenes (abstract and col. 2, lines 40-54). Each propylene is either a homopolymer of propylene or a random copolymer of propylene (abstract). The yarn is suited for use as a carpet face yarn due to its improved resiliency (col. 2, lines 40-43). In an alternate embodiment, the yarn by of a blend of a propylene homopolymer and a copolymer (col. 2, lines 55-60). The propylene continuous filaments are bulked by any known texturizing means in the art, but for use as a carpet fiber are usually bulked by hot air texturizing (col. 6, lines 7-26). After texturizing, the filaments are twisted into a yarn and heat set (col. 6, line 27-col. 7, line 13). The yarns exhibit a heat shrinkage ranging from 10-70% (col. 7, lines 14-28). Conventional additives, such as stabilizers, antioxidants, flame retardants, coloring agents, and antisoiling agents, may be incorporated into the polypropylene polymer (col. 8, lines 10-14). The denier of the BCF yarn ranges from 500-10,000 (col. 8, lines 20-27). The number of filaments per yarn ranges from 50-250 filaments (col. 7, lines 47-50).

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Similarly, Clementini discloses a polypropylene yarn of bulk continuous filaments or staple fibers, wherein the propylene polymer is a co- or terpolymer of propylene which is optionally blended with a polypropylene homopolymer (abstract and col. 2, line 59-col. 3, line 1). The yarn is suited for use as a carpet face yarn due to its improved resiliency (col. 2, lines 59-61). In an alternate embodiment, the yarn by of a blend of a co- and terpolymers of propylene, optionally with a propylene homopolymer (col. 3, lines 2-26). The propylene continuous filaments are bulked by any known texturizing means in the art, but for use as a carpet fiber are usually bulked by hot air texturizing (col. 9, lines 44-63). After texturizing, the filaments are twisted into a yarn and heat set (col. 9, lines 64-66). The yarns exhibit a heat shrinkage ranging from 10-70% (col. 10, line 52-col. 11, line 4). Conventional additives, such as stabilizers, antioxidants, flame retardants, coloring agents, and antisoiling agents, may be incorporated into the polypropylene polymer (col. 12, lines 3-7). The denier of the BCF yarn ranges from 500-10,000 (col. 12, lines 20-31). The number of filaments per yarn ranges from 50-250 filaments (col. 11, lines 23-26).

Thus, it can be seen that Galambos and Clementini teach the presently claimed invention with the exception of (a) the bulk level and (b) the PCR values. However, with respect to bulk levels, the present claims are deemed obvious over the cited prior art. Since neither reference discloses limitations on bulk level, one must assume that said bulk levels are not critical to the invention. Thus, one skilled in the art would look to the prior art for known bulk levels. Additionally, it would have been obvious to one skilled in the art to employ bulk levels within the presently claimed range, since it has been held that where the general conditions of a claim

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are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

With respect to the presently claimed PCR values, it is asserted that these values would be met by the Galambos or Clementini inventions having a bulk level of 2-20%. The prior art clearly teaches polypropylene BCF yarns for carpet which have increased resiliency. However, the resilient property of the prior art is not measured by Applicant's Plug Crush Recovery method. Thus, a direct comparison between the prior art and the present invention cannot be made. Yet, it is asserted that the prior art inventions would possess the claimed PCR values since said prior art meets all the structural (i.e., BCF yarn, denier, bulk, twist, yarns per filament) and chemical limitations (i.e., polypropylene homopolymer or copolymer with or without additives) of the present claims and since said PCR values are a direct function of the chemical and structural features of the BCF yarns. Therefore, claims 92-127 are rejected as being obvious over either the cited Galambos or Clementini patents.


Conclusion

6. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Cheryl Juska whose telephone number is 703-305-4472. The Examiner can normally be reached on Monday-Friday 10am-6pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Terrel Morris can be reached on 703-308-2414. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.



CHERYL A. JUSKA
PRIMARY EXAMINER

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April 7, 2002